

Census and Economic Information Center

Volume 2, Issue 1, Winter 2006

Montana Department of Commerce

RECENTLY RELEASED

January 20, 2006

[Women-Owned Business, 2002
Economic Census](#)

January 6, 2006

[Age 18 years and over for all
States, July 1, 2005](#)

December 27, 2005

[Consolidated Federal Funds
Report, 2004](#)

December 21, 2005

[State Population Estimates
2005](#)

December 2, 2005

[Income and Poverty Data for
Counties and School Districts,
2003](#)

UPCOMING RELEASES

March 28, 2006

State Annual Personal Income,
2005 (preliminary)

Spring 2006

County Population Estimates,
2005

Summer 2006

City/Town Population Estimates

CEIC WEB SITE

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[MAP: County Population
Percent Change Between
2000 Census and 2004
Estimates](#)

[MAP: Disability](#)
Number of People 21 Years
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Turning Data Into Knowledge

Pam Harris, Bureau Chief

Our 2006 Winter issue includes an eclectic collection of articles ranging from male/female ratios by county, to a manufacturing renaissance (of sorts) in Montana, to global implications of population growth.

In honor of Valentine's Day, take a look at *What the Numbers Say* and accompanying map to find the ratio of single males to single females. While no single indicator can capture marital status, this ratio, based on the population age fifteen and over, comes close. Check out your county on page two.

In *Economic News, Manufacturing in Montana*, beginning on page three, recently released state level information from the Census Bureau indicates Montana is gaining manufacturing jobs with a 4.5 percent increase in the number of employees between 2003 and 2004. Track one of the fastest growing subsectors, the Food Products industry, which includes companies making confectionaries (chocolate being one), milling various grains, processing sugar beets, producing dairy products, and meatpacking.

In our feature article, *From Billings to Beijing*, go beyond Montana's borders and look at population growth on a global scale. Starting on page three, read about the significance of this growth for Montana, the United States and the world as well. ■

What the Numbers Say...

Where have all the cowboys gone?

Christie Wolfe, Research Technician

With Valentine's Day upon us we couldn't resist the temptation to run a few numbers on a pertinent subject; ratio of single males to single females in Montana and the United States. If you're a single female looking for marriage in Montana, you've got your work cut out for you. As the 2000 Census indicates, females outnumber the males statewide. Take a look at this month's map created by GIS Coordinator, Kris Larson on page two. As indicated in gender demarcated pink and blue, there are only 94 single men for every 100 single women in Montana. If this process were a game of musical chairs, at the end of the last song, six women would be left without a seat and the other 94 women would default to one male (no choices).

This ratio is somewhat better for single women now than it was during the 1990 Census. Those figures demonstrate that there were only 89 single men for every 100 women (that's 11 ladies with no place to sit).

Nationally, for females, it gets harder. There are 86 single men for every 100 single women. If you're a single male looking for matrimony in Montana, this map should make your day with 106 single women to every 100 single men. Happy hunting! ■

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Article:

*From Billings
to Beijing*

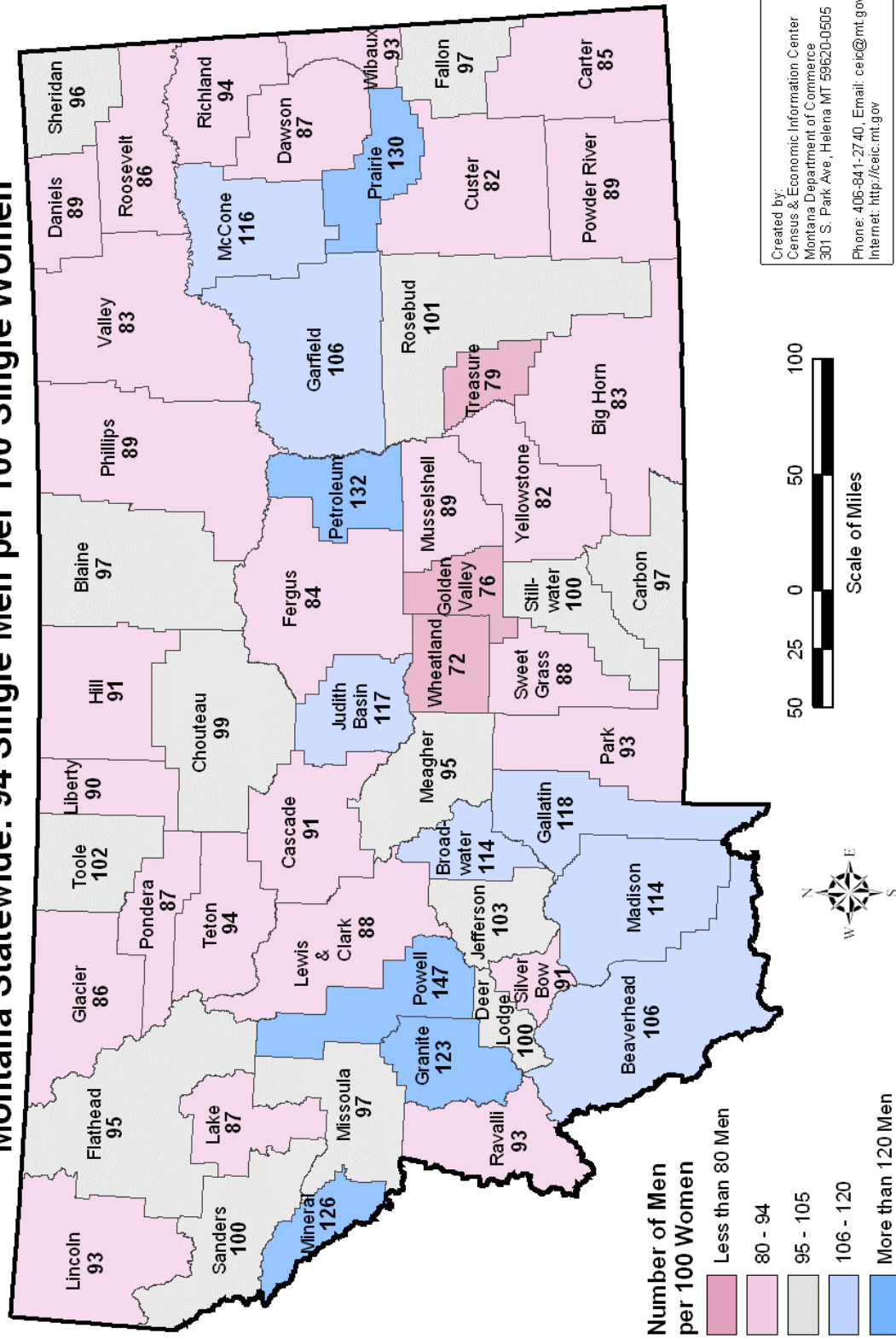
**"Facts are
stubborn things,
but statistics are
more pliable."**

Laurence Peter

CENSUS 2000: MONTANA

Ratio of Single Males to Single Females

Montana Statewide: 94 Single Men per 100 Single Women



Source: U.S. Census Bureau, Census 2000, Summary File 3 (SF 3) - Sample Data, Table P18. SEX BY MARITAL STATUS FOR THE POPULATION 15 YEARS AND OVER. Ratio of Males to Females based on population that has Never married, is Widowed or Divorced.

From Billings to Beijing

The Global Implications of Population Growth

Andrew Geiger, Research Analyst

At the end of 2005 a group of economists from the central bank of China met with members of the Schweitzer administration and state officials to discuss the issue of the rapid de-population in rural areas. Needless to say, there was a pretty wide gulf between the two sides of the table. While Montana has certainly seen a precipitous decline, the visitors told a tale of tens of millions of unemployed people in China's rural areas. The same forces in our country that changed the need for a brood of strong farm hands has hit China, with this population skewed towards the male sex (more on this later), and no option but to look to the explosive rise of manufacturing jobs in China's teeming cities.

In 1950 there were 2.5 billion people in the world; today China and India alone rival this number (children ages 0-4 in these two countries equal 2/3 of the total U.S. population). The world population now stands at 6.5 billion, a 160% increase since 1950. The macro question here is: what does this mean, if anything? Do all of us represent dots on an impressionist painting that provide a clear picture of what lies ahead, or is this phenomenon inherently meaningless? Do future generations of students need to learn the name Thomas Malthus?

How We Got Here

Malthus famously predicted a tipping point in which a natural stabilizing of the population would occur due to a limited food supply, with disease and warfare as secondary factors due to population density. Born in the 18th century, the Englishman couldn't foresee things like modern refrigeration and bio-engineered foods, let alone Hostess Twinkies (Idaho's first billionaire, J.R. Simplot, began to amass his empire by creating the "tator tot," which he promptly sold to the U.S. military).

There are two leaps that set us on the path to our current world population. The first was the transition from hunter/gatherers to farmers. While crop yields are unpredictable, it certainly provides more of an engineered approach to feeding the village. Europe grew significantly coming out of the dark ages due to the introduction of corn from other lands; just before the potato famine the average Irish workingman ate ten pounds of potatoes a day, with a dearth of meat and protein in general. Dr. Loren Cordain, a (Beijing...continued on page 4)

Economic News

Manufacturing in Montana

Susan Ockert, Senior Economist

Manufacturing jobs have increasingly been shifted overseas, resulting in U.S. plants being closed and workers being laid off. Recently, both Ford and GM announced deep job cuts along with several plant closing. However, here in Montana, the Manufacturing sector is enjoying a renaissance.

One factor that may be leading the up tick in jobs from 2003 to 2004 is the use of computers and the Internet. According to the U.S. Department of Commerce [E-Stats publication](#), Manufacturing led all industry sectors in e-commerce. With the use of the Electronic Data Interchange (EDI) system, companies can easily buy, sell and trade information over the Internet.

Furthermore, the [2002 State New Economy Index](#) indicates the Big Sky state is embracing 21st Century technology. Montana placed 17th in the percentage of manufacturing firms with Internet access, thereby connecting them to the EDI system. (Manufacturing...continued on page 5)



Beijing Continued:

professor and nutrition researcher at Colorado State University, makes the argument that from an evolutionary standpoint we should return to eating solely meats, leafy vegetables, fruits and nuts since our genes are more accustomed to this than legumes and grains¹. His critics say resources could not sustain this diet for 6.5 billion people: imagine China without rice, Cuba without black beans, the United States without french fries... Cordain sounds absolutely Malthusian by countering that if we hadn't made this transition in the first place the world population would stand at a more *natural* rate.

Yet the real leap came not with bread but with water. Prior to modern water treatment systems and antibiotics, dysentery ravaged the population, particularly the young and old, to keep it brutally in check. Leaving wars and violence aside, this is probably enough to tip the argument towards Hobbes over Rousseau as to what the state of nature was really like. Nasty, brutish and short, indeed!

Connecting the Dots

Even though population growth has slowed from what had once been predicted—if U.N. predictions hold up the growth rate over the next 45 years will be 38.5% compared to 113% in the previous 45 years—we still have to look at what the population level will mean to the course of human history. And in doing so you come back once again to three categories identified by Thomas Malthus: food supply, disease and war.

With food we see a challenge, yet a different one than Malthus envisioned. Technology allows us to change how we eat today, as even here in relatively remote Montana we can have farm raised salmon and avocados in winter. Yet might there not be some unforeseen consequences down the road (or today) through interjecting ourselves into the cycles of nature? At what point do we begin competing with ourselves? Consider that there are currently 31 persons per square mile in the U.S., estimated to go to 41 by the middle of this century; Americans eat an average of 63.4 pounds of beef per year; a cow/calf grazing combination requires anywhere between 2 to 15 acres per cow based upon the region; the U.S. added 12.2 million people since 2000. Of course a national diet still depends largely on wealth. What would 1.3 billion Chinese on a Montana diet mean to the land equation? (The tenets of Hinduism save us in the case of India.)

In disease control we clearly have major scientific advantages over Malthus' time, yet our mobility is also at an all time high causing alarm for increased exposure that was marginalized 200 years ago. The last major flu pandemic was caused by the deployment of soldiers during WWI; and we know the disease ramifications of the original mobile Europeans to North America.

You don't have to be a brilliant strategist if you have more chess pieces.

This leaves us questions regarding security and armed conflict. Mao Tse Tung was reported to say that if a war broke out between his country and Russia he would simply send over deployments of a million persons at a time. You don't have to be a brilliant strategist if you have more chess pieces. Technology has once again changed the picture, as we no longer fight wars in the historical conventional sense. Yet consider population numbers under the current security threat of terrorism. In an interesting and somewhat controversial book, political scientists Valeria Hudson and Andrea den Boer, of Brigham Young University and the University of Kent at Canterbury respectively, catalogued the effects of gender engineering to favor the birth—and continuation of life—of male offspring.² Using census figures they were able to statistically prove which countries have skewed natural sex ratios through direct parental action both during pregnancy or after determining gender at birth. As these surplus males hit

young adulthood without marital prospects they are left adrift from basic stabilizing societal forces. Given that marriage still contains an economic component, in a very literal sense in many of the impacted countries, this army of single men tends to be the poorest and least educated. The Chinese call these men *bare branches* (also the title of the book), and the authors raise the specter of how this unfulfilled human capital might be exploited by terrorist organizations or future dictatorial governments looking for expansion through warfare. They identify China (with a underground Muslim population in the western provinces), India (12% Muslim population), and several smaller countries, mostly concentrated in Asia. (Beijing...continued on page 6)



“Manufacturing” Continued:

One manufacturing sector taking advantage of e-shipsments through the EDI system is Food Products. Included in this subsector are companies milling various grains, processing sugar beets, making confectionaries like chocolate, producing dairy products, and meatpacking. According to the E-stats report, this industry subsector accounted for 7% of total manufacturing e-shipsments. This may explain why Montana’s Food Products sector realized growth in every performance category during the 2003 to 2004 period. Capital expenditures jumped 117%, value added was up 38%, value of shipments 26%, payroll 19% and employment 15%, as reported in the recently released [2004 Annual Survey of Manufacturers](#).

In addition, this subsector’s contribution to the total Manufacturing industry rose. In 2003, only 12.9% of all manufacturing employment was in Food Products compared to 14.2% in 2004. Capital expenditures also grew, from 2.8% in 2003 of all manufacturing to 8.1% in 2004.

Despite less timber harvests from national forests, Montana’s [Wood Products](#) industry did experience growth across the board from 2003 to 2004. Capital expenditures rose three-fold, value added increased by over 50%, over 300 workers were added, and the value of shipments rose by nearly 30%.

Montana’s other major Manufacturing industries are Nonmetallic Minerals, Fabricated Metals, Machinery and Miscellaneous. The only subsector losing employees was Machinery. Payroll declined in Nonmetallic Minerals despite adding nearly 300 workers. Overall in Manufacturing, employment rose by 746, value of shipments increased from \$5.3 billion to \$6.5 billion, and the value added to the products grew 33%.

2004	1,000s of Dollars				
	Employees	Payroll	Value Added	Value of Shipments	Total capital Expenditures
Manufacturing	17,311	\$664,859	\$2,386,445	\$6,468,831	\$193,155
311 Food Products	2,464	\$81,157	\$289,346	\$666,718	\$15,555
321 Wood Products	4,109	\$147,368	\$ 420,187	\$980,445	\$25,102
327 Nonmetallic Mineral	1,405	\$35,793	\$132,443	\$216,365	\$7,878
332 Fabricated Metal	1,386	\$48,872	\$103,583	\$196,782	\$2,478
333 Machinery	1,079	\$48,438	\$128,190	\$ 183,426	\$7,567
339 Miscellaneous	1,447	\$44,878	\$107,862	\$ 171,756	\$3,732

Source: 2004 Annual Survey of Manufacturers, U.S. Census Bureau

Manufacturing employee compensation is concentrated in three Montana counties – Flathead, Missoula, and Yellowstone – according to the U.S. Bureau of Economic Analysis [County Estimates of Compensation by Industry](#). In 2004, workers in Yellowstone County received a quarter of all Manufacturing compensation. Employees in Flathead County earned 17% of Manufacturing compensation while Missoula workers earned 16%.

Yellowstone County is home to three petroleum refineries operated by Cenex, Conoco, and Exxon, as reported by the Montana Department of Natural Resources and Conservation, [2003 Oil and Gas Annual Review](#). Over 90% of all compensation earned in the Petroleum and Coal Products Manufacturing subsector is earned in Yellowstone County. Compensation in this sector accounted for nearly 50% of all Manufacturing compensation. (Manufacturing...continued on page 6)



“Beijing” Continued

Why St. Ignatius Doesn’t Play Billings West in Football

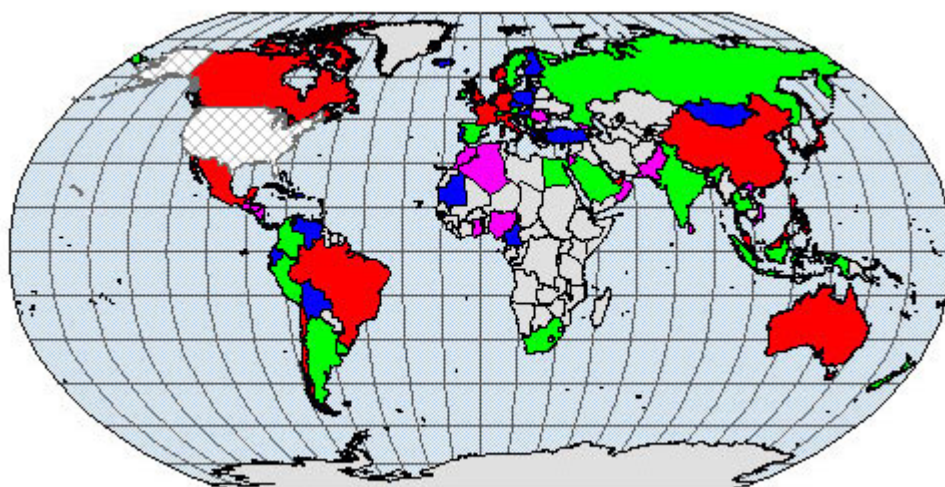
Dr. Brad Elison, a psychology professor at Carroll College, says that while tests to measure intelligence are problematic, the best research shows that less than 1% of all humans are at a genius level. Go back to the numbers of children ages 0-4 from the various censuses conducted at the millennium and you can see the United States doesn’t have a very deep bench under this scenario. Recent calls from the federal government to improve math and science education, however belated, are a step in the right direction. Our state and nation may well need every bit of our historical, educational, institutional, legal and economical advantages. It was just as this rapid human growth began to really take off that Bob Dylan penned the line: *The slow one now will later be fast, as the present now will later be past...for the times they are a changin’*. ■

1. Cordain, Loren, *The Paleo Diet*. New York: John Wiley & Sons, Inc. 2002.
2. Hudson, Valeria M. & den Boer, Andrea M. *Bare Branches*. Cambridge: MIT Press. 2004.

“Manufacturing” Continued

Missoula County is dominated by the Paper Products subsector, with the only Pulp and Paper Mill in the state. Wood Products facilities also produce lumber, log homes, posts and poles, and log furniture. Flathead County also is home to Wood Products manufacturing businesses, similar to Missoula County. In addition, businesses in the county manufacture machinery used in the Construction and Logging industries plus produce heat, air conditioning and refrigeration products, industrial furnaces and ovens, and office and farm equipment.

Another indication of Montana bucking the national downward trend in Manufacturing is its manufactured exports. Montana’s exports increased 58% from 2003 to 2004, as reported by the United States Department of Commerce, [International Trade Administration](#). Nearly a quarter of all manufactured exports are Machinery with Taiwan receiving 21% of the total. Canada imports almost half of all of Montana’s manufactured exports. Even though, at the national level, the Manufacturing industry continues its decline, Montanans can point to more employment, higher payroll, larger shipments and growing exports. A revival in manufacturing may be in Montana’s future. ■



2004 MANUFACTURES (in thousands)
Exports from Montana

Red	\$1,161	: \$199,136
Green	\$112	: \$1,161
Blue	\$26	: \$112
Pink	\$3	: \$26
White	Zero	

Office of Trade and Industry Information, Manufacturing & Services, International Trade Administration
U.S. Department of Commerce